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Establishing the Civil Defense Emergency Hospital

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CIRCULATE



U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Public Health Service

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Establishing the Civil Defense Emergency Hospital

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Public Health Service
Division of Health Mobilization
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The Need

If this country is attacked with thermonuclear weapons, it is estimated that up to 80 percent of the 1,700,000 hospital beds available in the United States today may be destroyed or their use denied for varying intervals of time due to radioactive fallout. There will be an unprecedented need for hospital space to care for persons seriously ill or injured as a result of the attack.

Each community should develop a plan for providing medical care in the event of enemy attack. This plan should provide for alternate courses of action because the postattack situation is subject to many variables such as the fallout pattern, proximity to area of destruction, numbers and types of casualties, personnel available, and transportation available. The plan should be consistent with State disaster plans.

Medical supplies have been stockpiled by the Federal Government to help communities meet their responsibilities for providing medical care post-attack. There are two types of these supplies: First aid medical supplies for community shelters and Civil Defense Emergency Hospital units (CDEH's).

CDEH's with a 30-day supply operational capability contain approximately 725 boxes, weigh about 50,000 pounds, and require about 7,280 cubic feet (1,120 square feet) of storage space—30 cubic feet refrigerated storage; 437 cubic feet flammable storage; 1,165 cubic feet heated storage; 5,648 cubic feet general storage.

1. Medical Self-Help Care in Shelters

The Federal Government has stockpiled a limited quantity and variety of first aid medical supplies in public fallout shelters. Shelter occupants will render self-help care to themselves and their neighbors.

A Medical Self-Help Training Program for the public has been developed by the Federal Government. Information on this program can be obtained from local and State health departments and civil defense offices.

2. Hospital Care

The Federal Government has also acquired CDEH units and prepositioned them in communities throughout the country. As soon after attack as an area is safe from fallout, these CDEH supplies and equipment can be used to set up emergency 200-bed hospitals in schools or other suitable buildings; or they can be used to expand permanent hospitals.

Although the CDEH permits the establishment of a completely functional 200-bed general hospital, its equipment is necessarily austere because it is designed to provide care for large numbers of sick and injured under the pressure of emergency conditions. Patient care under these conditions must be provided with sparing use of supplies and limited personnel. Services will not be the same as those provided in permanent hospitals in peacetime.

The full value of the CDEH as a disaster medical care resource can only be realized through certain peacetime preparations. The information that follows is intended to guide health departments, civil defense officials and local health and medical volunteers, especially those in communities having prepositioned CDEH's, in these preparations. It will also serve to inform persons who are considering the storage of a CDEH in their community of the responsibilities they will assume.

No attempt has been made to provide detailed plans, but the most important planning considerations and problems are discussed. Much of this information is based on experience obtained through CDEH training exercises.

Consistent with community and State plans, persons responsible for a CDEH should develop a plan for using the unit, should assign staff to operate it, and should provide appropriate training for those assigned.

Planning To Use a CDEH

A CDEH unit contains the equipment necessary to set up a 200-bed emergency hospital in a school or other suitable building and sufficient expendable supplies to keep it in operation for about 30 days. Although earlier models of the CDEH did not contain supplies for a 30-day period, it is planned to build up their operational capability to this level as quickly as possible. Hospital sections provided for are admitting and triage, operating rooms, wards, X-ray, laboratory, pharmacy, and central supply. Triage is sorting patients according to tentative diagnosis and priority of treatment.

Community health and civil defense leaders, who are responsible for storage of a CDEH unit, are also responsible for preparing for its use. They should plan to use the unit to expand a permanent hospital, or to establish a separate 200-bed hospital in a suitable existing building. The way it would be used should be specified in the community civil defense plan. Local health

officials, medical society and hospital council executives, hospital administrators and responsible local governmental authorities should be informed of the location and mission of each CDEH in their area.

a. Expanding permanent hospitals

Preattack preparations to use the CDEH to augment the disaster capability of an existing hospital will consist generally of:

- (1) Preparing an up-to-date disaster plan for the hospital which contains specific provisions for utilizing all components of the CDEH.
- (2) Assigning sufficient disaster staff to the existing hospital to provide medical care for the additional patients.
- (3) Providing necessary training for the disaster staff.
- (4) Arranging for provision in a disaster of necessary supporting goods and services, such as water, fuel, feeding, laundry, traffic control, transportation and communications.

b. Separate hospitals

Preattack preparations to use the CDEH unit to establish a separate hospital will consist generally of:

- (1) Selecting a building and preparing a floor plan for adapting the building for use as the CDEH operating site.
- (2) Arranging for transporting the CDEH to the operating site if it is not stored in the building selected for its use.
- (3) Preparing a written plan which describes in detail how the CDEH would be set up and operated in disaster.
- (4) Assigning personnel in depth to prepare the building post-attack, to open cases and to set up equipment.
- (5) Assigning personnel to staff the hospital postattack (see fig. 16).
- (6) Providing necessary training.
- (7) Arranging for the provision in a disaster of necessary supporting goods and services, such as water, fuel, feeding, laundry, communications, transportation and traffic control.

The greater part of this booklet is devoted to a detailed discussion of these preparations to set up the CDEH as a separate facility.

Other Uses of a CDEH

There is always the possibility that in the actual postattack situation the CDEH may not be required for its planned primary use. It may, however, be put to alternate uses as the situation dictates. If the CDEH is not required postattack in the community in which it is stored, both the unit and staff may be moved to and used in another community; or it may be retained in the community and used to provide supplies and equipment to support first aid activities or to serve as a general supply backup to all community medical care activities. However, if extensive amounts of material are removed from the CDEH for first aid or other purposes, the ability of the remainder of the unit to serve as a hospital is seriously impaired or destroyed.

Obtaining a CDEH

CDEH's are Federal property, loaned to the States and stored in communities for use in a national civil defense emergency. Under special circumstances a CDEH may be used in a natural disaster (*see app. A*).

Application for acquiring and storing a CDEH is made through local civil defense officials to the State agency responsible for the emergency health program, and thence to the Federal Government. CDEH's are assigned to a specific community on the basis of such considerations as community location, availability of adequate storage facilities, availability of staff and availability of responsible custodianship.

PREATTACK PREPARATIONS

A. PLANNING THE USE OF BUILDINGS FOR CDEH'S

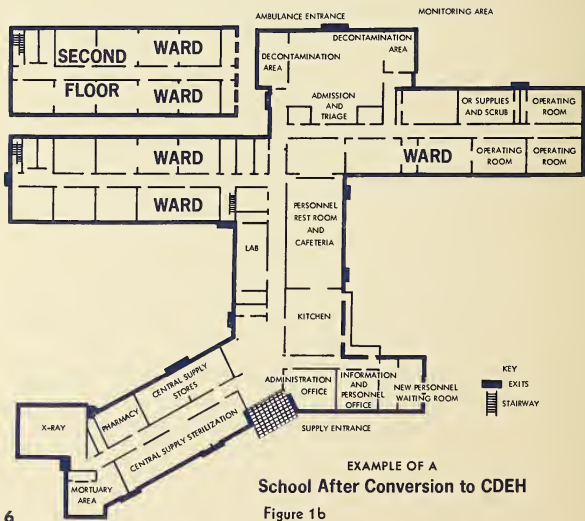
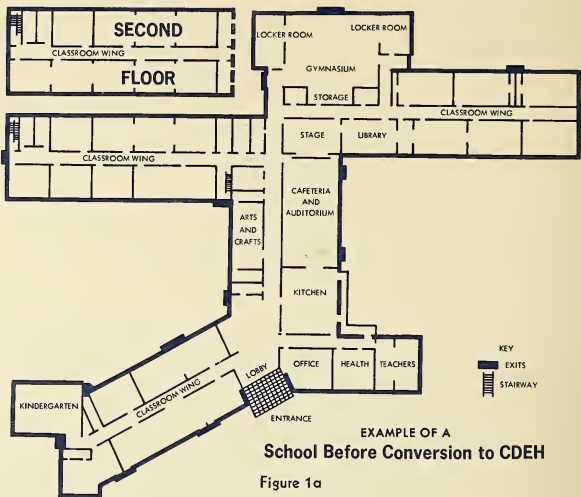
1. Selection of Building

Because of their size, layout and available facilities, school buildings are well suited as operating sites for CDEH's, however, other suitable buildings may be used. Whenever possible, a CDEH should be stored at the site where it will be used. Where it is necessary to place the unit at a separate storage location, the location should be within reasonable transporting distance of the planned operating site and in the general area it is expected to serve according to the community civil defense plan. Availability of the building for CDEH use should be checked against the community civil defense plan and should be confirmed periodically.

Building requirements

In selecting a building, features to be looked for should include:

- a. Floorspace of approximately 15,000 to 20,000 square feet which is, to the extent possible, all on the first floor. Schools of the 16 to 25 classroom size approximate these square footages. Certain areas of the chosen floorspace must be capable of supporting heavy equipment, such as the X-ray unit.
- b. An ambulance entrance, preferably located on a driveway with two open ends to permit easy entrance and exit of vehicles.
- c. Wide doorways, halls and stairways which will permit the handling of patients on litters, and make it possible to move in CDEH supplies and equipment without difficulty.
- d. Toilets and washrooms to meet the requirements of a total of at least 400 patients and personnel.
- e. A cafeteria or food preparation area within or near the building.



f. Adequate water, heating, lighting and ventilation. (The CDEH contains a generator to provide auxiliary power if the local electrical supply fails.)

2. Floor Plans

After the building has been selected and designated for CDEH use, a floor plan should be drawn up to show the location of the CDEH functional areas (see "Functions of the Hospital Sections," p. 17). The floor plan may be adjusted postattack to accommodate the types of sick and injured patients admitted to the hospital. A copy of the floor plan should be posted preattack in a conspicuous place in the building where it can be seen and used postattack by persons unfamiliar with the building. A sample floor plan is shown in figures 1a and 1b.

In drawing up the floor plan, individual building arrangements and facilities will influence the location of certain hospital areas. The existence in a school office, for example, of intercom equipment and telephones will definitely suggest that room as the logical place to set up the communications and administration section. The food preparation service will be located in the kitchen, lunchroom or cafeteria.

The presence of water and sinks will influence the location of the laboratory, surgical scrubroom or the preparation room of the sterilizing area.

However, certain sections should not be located too close to certain other sections. For example, the sterilization section, with its open-flame stoves, should be located some distance from the operating rooms where ether will be in use as an anesthetic. Also, X-ray equipment should be located in an outside corner room having masonry partitions or walls separating it from other rooms. If this is not possible, it should be placed at least 25 feet from areas where there will be either patients or hospital personnel.

To help in the preparation of the floor plan, figure 2 gives some recommended space requirements for hospital areas with suggestions as to where they should be located.

B. PLANNING INITIAL ESTABLISHMENT OF THE HOSPITAL

Certain personnel of the hospital staff will be assigned the responsibility for readying the building after attack for use as a CDEH and for moving in and setting up the supplies and equipment. These individuals who will be referred to as activation personnel, should be recruited locally

Figure 2—Recommended Minimum Space Requirements

Area	Minimum dimensions where critical	Square feet	Remarks
MONITORING AND DECONTAMINATION		300	Located accessible to admitting and triage entrance, outside, if possible.
ADMITTING AND TRIAGE		1,000	Essential that it be located adjacent to entrance off drive.
WARDS	18' x 50' each	9,500	Should be grouped together, as many wards as possible on 1st floor, balance as necessary on 2d floor. Shock ward, if set up, should be located near admitting and triage and operating rooms.
OPERATING ROOMS	25' x 30'	750	1st floor, away from general hospital traffic.
X-RAY	20' x 15'	300	1st floor, set apart from other sections, with protective shielding.
LABORATORY		200	1st floor (2d floor, if necessary) near water source.
PHARMACY		500	1st floor (2d floor, if necessary) close to central supply.
CENTRAL SUPPLY		1,400	1st floor, 150 feet or more from operating room. Water source and good ventilation necessary.
ADMINISTRATION OFFICE		750	Away from heavy traffic area, either 1st or 2d floor; include space for communications and messenger staff.
MORTUARY AREA		300	1st floor out of casualty flow, with exit to drive. Adjacent building, if available, is preferred.
		<u>Total</u> 15,000	

and given preattack assignments to report to the building as soon as it has been determined safe after an attack. Alternates should be assigned to these positions as a safety factor. Activation personnel include:

Chief of Staff
Hospital Administrator
Director of Nursing
Building Custodian
Helpers

Note: Activation personnel are a part of the CDEH staff (see fig. 16) and will continue to work in the functioning hospitals.

The preattack duties of the activation personnel are as follows:

1. Chief of Staff and Hospital Administrator

The chief of staff should be a physician, preferably one with hospital executive experience. The hospital administrator should be qualified in administrative and executive functions. They are jointly responsible for overseeing the establishment of the CDEH and, later, for directing operation of the hospital. The chief of staff is primarily responsible for setting up the medical sections and the hospital administrator for setting up all nonmedical sections. In the preattack period, they should:

- a. Become familiar with their community and State civil defense plans, particularly the emergency health sections of these plans.
- b. Become familiar with the supplies and equipment in the CDEH.
- c. Become familiar with the floor plan of the building to be used as the CDEH operating site.
- d. Determine space requirements for hospital areas, designate CDEH functional areas on the floor plan and make available copies of the plan so they will be accessible after a disaster.
- e. Plan for organizing and staffing the CDEH.
- f. Examine utility arrangements in the building and make plans for the additional utilities that may be needed.
- g. Become familiar with present communications facilities, arrange for provision of two-way radio equipment and operators, when possible, and ensure assignment of adequate messenger staff.
- h. Arrange with the building custodian the procedures for clearing areas required for hospital use. Furniture required for the hospital should be designated so that it will not be removed.

- i. Arrange with proper civil defense officials for provision of necessary supporting goods and services, such as transportation, communications, water, feeding, laundry and traffic control.
- j. Plan for the postattack procurement of necessary supplies not provided in the CDEH unit (see p. 15).
- k. Plan for periodic postattack transmission to the health section at civil defense headquarters of data on admissions, patient loads and support requirements.
- l. Arrange for and participate in training of CDEH staff.
- m. Participate in test and training exercises.

2. Director of Nursing

The director of nursing should be a professional nurse with senior administrative and supervisory hospital experience. In the preattack period, she should:

- a. Become familiar with the community and State civil defense plans, particularly the emergency health sections of those plans.
- b. Become familiar with the supplies and equipment in the CDEH.
- c. Become familiar with the floor plan of the building to be used as the CDEH operating site.
- d. Work closely with the chief of staff and the hospital administrator in the nursing aspects of their preattack preparations (items "d." to "m." above).
- e. Become familiar with the principles and techniques of disaster nursing including: adaptation to austere care to the degree that the situation demands; utilization of professional nurses to perform certain functions ordinarily performed by physicians; and use of auxiliary nursing personnel for selected duties normally performed by professional nurses.
- f. Become familiar with CDEH nursing personnel requirements and develop appropriate staffing plans including recruitment and training of any additional needed personnel for postattack assignment.

3. Building Custodian (Maintenance Engineer)

The building custodian should usually be the present custodian of the building to be used for the hospital. He will be responsible for maintaining the building postattack and for furnishing necessary utilities. In the pre-attack period, he should:

- a. Consult with and advise the chief of staff, hospital administrator and director of nursing in planning to use the building as a hospital. (The custodian would be involved especially in the establishment of procedures for clearing the building for use as a hospital and the designation of items not to be removed.)
- b. If the hospital is stored in the building, make arrangements for the unlocking of storage areas.
- c. Determine number of helpers needed in hospital maintenance such as plumbers or carpenters.
- d. Prepare a plan for setting up the hospital's electrical equipment and for lighting the hospital, including the provision of special lighting for certain hospital areas such as the operating rooms. (If the custodian does not have broad experience in electrical installation and servicing, an experienced electrician should be added to the staff.)
- e. Through consultation with a sanitary engineer, familiarize himself with methods of disposing of wastes, in case the sewage system is inoperable postattack.
- f. When it is available, become familiar with the booklet *Operation of Generators and Water Pump in the Civil Defense Emergency Hospital* (see app. B.), and train certain helpers in setting up and operating these pieces of equipment. See that gasoline and fuel oils are available for operation of generators.
- g. Take part in CDEH training and test exercises.
- h. Plan mechanical arrangements for the provision of an alternate water supply.
- i. Prepare plans for emergency heating.

4. Helpers

Forty or more persons for physical labor should be recruited from persons residing or employed in the neighborhood in which the building is located. A certain number of these should be in construction and maintenance occupations. Preattack, they should:

- a. Become oriented to the CDEH and the duties they will be expected to perform, such as clearing the building, moving in and setting up equipment and carrying patients on litters.
- b. Decide which of their own household tools will be useful in working in the hospital, such as claw hammers, screwdrivers and wire-cutting

pliers. They should be prepared to take these tools with them when they report postattack. (Where possible, a tool kit should be assembled and stored with the CDEH.)

c. Take part in CDEH training and test exercises. (Because of space limitations only a selected number may take part, although all should attend and observe.)

Importance of communications

One of the first services that should be established under the setting-up operation should be the provision of communications with the civil defense control center. For that reason preattack plans should be made for telephone switchboard operators and/or two-way radio equipment and operators to be on hand as soon as possible postattack. If it is not possible to establish telephone or radio communication, it may be necessary to call upon certain of the helpers to act as messengers.

C. TRAINING OF PERSONNEL

Plans should be made to train all persons who may someday help set up and operate a CDEH, so that they will understand the problems that may be created by attack, the organization of civil defense and the plan for operating the hospital. They should learn how to care for the sick and injured, using the equipment and supplies available. Professional and allied medical and lay personnel in all communities should be trained to work in a CDEH. In some communities they may be assigned to staff a hospital set up in their area, while in others they may be sent to staff a hospital in another disaster area. Two types of training should be given:

- a. Joint training for the entire CDEH staff.
- b. Separate training courses for special personnel categories.

1. CDEH Training Exercises

In order to familiarize the entire hospital staff with the plan of operation of the hospital and the supplies and equipment available, training exercises should be held. An exercise may involve the following:

- (a) Setting up the CDEH.
- (b) Processing simulated casualties.
- (c) Practicing the operation of mechanical equipment.

It is not necessary to train the entire CDEH staff in all of the procedures. The exercise should be evaluated to identify and resolve any problems encountered. Only CDEH's designated as training units may be used for these exercises.

2. Training Courses

Although all personnel need to receive training in civil defense organization and disaster patient care, certain categories require more extensive training than others.

- a. Physicians and allied medical personnel should learn how to adapt their special skills to the problems faced in a disaster and should familiarize themselves with the austere equipment and supplies contained in the CDEH and should recognize the need for improvisation.
- b. Allied medical personnel, in addition, should receive supplemental training in medical treatment techniques, so they can be useful assistants to physicians.
- c. Medical aides (see fig. 16) require extensive training. In a disaster, because thousands of persons will need medical care and there will not be enough physicians and nurses to provide that care, trained medical aids will be needed to perform a variety of duties including some performed by professional nurses in peacetime. They will form the largest personnel group on the hospital staff.

Medical aids may be lay volunteers (initially untrained) who are recruited to help staff the hospital, or they may be experienced hospital personnel. All medical aids should receive familiarization and training in organization of civil defense, first aid, hospital care, medical recordkeeping and operation of the various CDEH functional sections. They should also be trained in the performance of their assigned disaster functions. As far as possible, all aids should receive the same training so that they can be used interchangeably for job assignments.

Some training equipment and materials such as CDEH training hospital manuals, publications and visual aids for training persons to staff a CDEH are now available through the State agency responsible for emergency health preparedness. Additional materials are in the process of being developed. (See app. B for list of publications.)

SUPPLIES AND EQUIPMENT

A. PACKAGING OF CDEH UNIT

1. Each box, crate or bundle is numbered so that it may be cross referenced to the master case listing in order to identify the functional section to which it belongs.
2. Approximately 25 to 30 of the boxes contain an assortment of items in order to reduce the total number of boxes. The contents of mixed cases are identified by a list in an envelope, one copy attached to the outside of the box and the other copy placed inside the box. The list can be affixed for ready reference to the outside of opened boxes while they are being unpacked.
3. Each CDEH contains master lists of the entire contents, so that personnel can determine what items are included with the hospital supplies and in what box they are located.

B. TRANSPORTING THE CDEH

As stated earlier, the CDEH should, where possible, be stored in the same building that is to be used as the operating site. When this is not possible, the unit will have to be transported to the operating site postattack. It must also be recognized that, after attack, it may be necessary to transport the unit to a distant disaster area where the need is greater.

Preattack plans should be made for loading the CDEH on trucks and transporting it to the building where it will be set up, if such movement is necessary.

C. DIFFERENCES IN CDEH UNITS

Since 1953, the Federal Government has carried on a program of assembling and packaging CDEH units and storing them in communities. As a better understanding developed of problems to be faced after nuclear

attack and as advances were made in certain types of equipment and supplies, new items were added to the units being packaged. For this reason, all the CDEH's now in storage are not identical. Differences exist, depending on the year the unit was packaged.

The 1962 model CDEH contains a number of items not in earlier hospital units and it reflects the latest developments in emergency health planning. A program is underway for upgrading earlier CDEH's to the 1962 model standard.

D. UNPACKING THE CDEH

When the CDEH unit is delivered to the building in which it is to be set up, the boxes will be placed in the functional area indicated by the master case listing. Boxes will be unpacked and equipment set up by the helpers who have been designated as activation personnel. All persons helping to set up the hospital should remember to:

- a. Open boxes carefully to prevent damage to either the box or the contents. The boxes should be saved because they will be useful as tables, stands and for other purposes during hospital operation.
- b. Remove from crates or boxes and set up only large equipment items. Supplies and smaller equipment items should be placed in appropriate functional areas but left in their boxes until needed.

E. ADDITIONAL SUPPLIES TO BE OBTAINED

Certain supplies not furnished with the CDEH unit, but necessary for the operation of the hospital, must be obtained from local sources. Preattack preparations should include making arrangements for obtaining these supplies after an attack. Such supplies include:

- a. Narcotics (obtained from physicians' offices, drugstores, drug supply houses or veterinary hospitals).
- b. Microscope and centrifuge (furnished with some CDEH's).
- c. Gasoline for fueling of autoclaves, sterilizer burners, lanterns and generators (regular automobile gasoline may be used).
- d. Motor oil for generators.
- e. Antifreeze for generators.
- f. Bottled gas for operation of autoclaves and sterilizers (for CDEH's with equipment requiring this type of gas).

- g. Electric cables for generators, extension cords, sockets, receptacles and light bulbs (some CDEH's contain a supply).
- h. Handtools for opening crates and making simple repairs—hammers, nailpullers, wire-cutting pliers, nails and prying tools will be especially helpful (some CDEH's contain a supply).
- i. Radiological monitoring equipment (should be calibrated and ready for use) and dosimeters.
- j. Commercial solvent, nonvolatile and nontoxic, such as trichlorethylene and detergents for removing coating in which instruments are preserved in storage.
- k. Housekeeping supplies such as brooms, mops, insecticides, etc. (some CDEH's contain a supply).
- l. Disassembled sawhorses should also be stored. When set up post-attack, they will be used for placing litters.

THE POSTATTACK HOSPITAL

A. FUNCTIONS OF THE HOSPITAL SECTIONS

The CDEH is designed to care for large numbers of seriously sick and injured persons. For effective operation, the hospital is divided into functional sections, each of which has its specific functions and equipment. It should be remembered, however, that in a disaster the chief of staff and the hospital administrator will organize the hospital to meet the requirements of the emergency.

As soon as the CDEH is set up, many of the less seriously sick and injured may arrive and expect care. Because the CDEH must conserve its resources to care for the more seriously sick and injured, provision must be made for treatment of the less seriously sick and injured in a building preferably only a short distance away from the hospital. The chief of staff must accept the responsibility for making sure such an installation is set up, so that the less seriously sick and injured can be diverted from the hospital.

The following is a description of the hospital functional sections suggested for the CDEH:

1. Monitoring and Decontamination

Near the admitting and triage section a monitoring and decontamination area is set up. Here patients are screened for radiation and decontaminated, if necessary, prior to entering the hospital. Monitoring should be done outside, if possible. If showers are available, the decontamination area should be located near the showers. Decontamination consists of removing radioactive clothing, showering or washing exposed skin surfaces, and, if necessary, cutting off hair. Contaminated clothing and hair are placed in covered boxes labeled "contaminated material" and placed in an area away from the patients.

Periodic radiation monitoring should also be done throughout the hospital in order to locate any potential radiation "hotspots," and when necessary, steps should be taken to reduce the radiation level.

2. Admitting and Triage

a. Sorting of patients

In admitting and triage, patients who are admitted are sorted according to types and severity of injury and type of medical care required, and sent to the ward area indicated by their condition.

Although the first sorting of patients is done in the admitting and triage section, sorting is a continual process in every section of the hospital, dictated by the patient's condition and the supplies and personnel available.

In a disaster the objective of triage is to use the available resources to save the lives of the greatest number of people. The only purpose of sorting is to assure that the available resources are used efficiently.

b. Records

The patients' hospital records are started in the admitting and triage section, if time permits (see p. 27). If not, they are started in the section to which the patients are moved.

c. Patients' personal effects

Personal effects of the patients are collected, placed in bags, if available, or bundled together and tagged, and are kept with them.

3. Wards

Ward areas are set up at the direction of the chief of staff in consultation with the director of nursing, according to the numbers and types of patients received in the hospital. He may designate such separate ward areas as surgical, medical, shock, burn, fracture, psychiatric, communicable disease or holding, as conditions require. There may also be separate wards for men, women and children.

If, for instance, the hospital receives many seriously injured patients who are in a state of shock, a separate shock ward may be established primarily for the control of hemorrhage and shock. Equipment for intravenous therapy and suction as well as blood pressure instruments are needed in this section.

An observation or holding ward may be established where patients with a poor prognosis will receive palliative treatment. It may also be used for patients awaiting transportation to other medical facilities.

4. Operating Rooms

a. Equipment and instruments

The CDEH contains equipment for three operating areas for general surgery. Equipment for each area includes lightweight folding operating tables, surgical lamps, instrument stands and basic surgical instruments. Additional assorted instruments are in the central supply section. Instruments packed with the operating area supplies should be taken, as unpacked, to the central supply section for cleaning and sterilization. Sterilization of all instruments is done in the central supply section. (Although sterilizers are available from central supply, no sterilizing should be done near the operating rooms because of the danger of explosion caused by proximity of the open-flame sterilizer burners to the operating room anesthetics.)

There are five folding operating tables included with the operating area supplies. They can be used as needed in the hospital for surgical operations or as examination or treatment tables.

b. Anesthesia

Three anesthesia units of the closed-circuit, gas-oxygen-ether type are included for the operating areas. Type D and/or M cylinders of oxygen and nitrous oxide as well as a quantity of ether are packed in each hospital. In addition, ether may be administered by the open-drop method without the use of the anesthesia apparatus.

c. Supply and scrub room

Near the operating rooms, in a room with water available, a surgical scrubroom should be set up. Operating room supplies can also be kept in this room if it is large enough or in a separate room nearby.

A suggested floor plan for setting up a two-table operating room is shown in figure 3.

5. X-ray

In the X-ray section there is a 15 milliamperere X-ray unit with a developing unit to process Polaroid radiographic paper in 60 seconds. It is operated from normal current sources, by its own portable generator, or by the central CDEH generator. It is designed primarily for examination of fractures and dislocations and detection of foreign bodies.

Note: When the X-ray unit is in use, the radiographic paper should be isolated from it to prevent fogging. The radiographic paper has a shelf life of about 1 year at room temperature, but if stored under continuous refrigeration is usable up to 5 or 6 years from date of manufacture. Therefore, periodic replacement of radiographic paper in CDEH's is required.

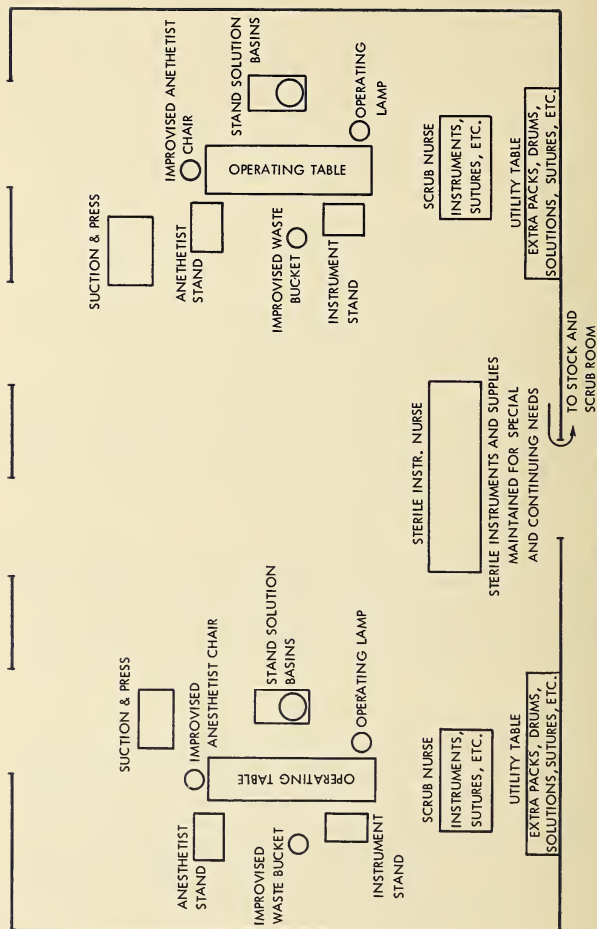


Figure 3.—Suggested Floor Plan for Two Table Operating Room

6. Laboratory

The laboratory is supplied with equipment and supplies for the basic clinical tests listed below. The laboratory should be located in a room with a sink if at all possible.

Test categories

a. Urinalysis

Acetone; albumin; bilirubin; glucose; microscopic examination; pH; and specific gravity.

b. Hematology

Differential; hematocrit; and white count.

c. Blood chemistry

Glucose; serum bilirubin; and total protein.

d. Bacteriology

Direct smears—Ziehl-Neelsen (stain TB).

e. Blood bank

Cross-matching; grouping; and typing.

7. Pharmacy

Pharmaceutical supplies furnish at least one medication in each essential therapeutic category: Anesthetics, analgesics, sedatives, anti-infectants, antiseptics, stimulants, antispasmodics, antihistamines, ophthalmic medications and intravenous solutions including dextran and serum albumin. Although most of the drugs are supplied ready for use, some techniques must be applied in the pharmacy before certain drugs can be used.

8. Central Supply

Central supply is responsible for two functions: (1) Storing and dispensing nonsterile supplies, which is handled by the Stores Subsection, and (2) cleaning and preparing supplies for sterilization, sterilizing them and dispensing to treatment areas, which is handled by the Preparation and Sterilization Subsections.

a. Stores subsection—storing and dispensing nonsterile supplies

With the exception of supplies designated for specific sections of the hospital, most of the CDEH supplies are delivered to central supply when the hospital is set up. Caselots of supplies and equipment are stored here and dispensed in small quantities as requested by the hos-

pital sections. Such supplies include utensils, basins, packaged dressings, towels, soap and other items which may be dispensed without being sterilized.

Because of the quantity and variety of equipment which it must handle, the stores subsection of central supply must be well organized. It must also be set up promptly, so that hospital sections can obtain the supplies they need.

b. Preparation and sterilization subsections—preparing, sterilizing, and dispensing supplies

Central supply furnishes sterile supplies for the entire hospital. Because surgical operations cannot be performed until sterile supplies are available, the preparation and sterilization subsections should be one of the first functional areas to be set up.

(1) *Preparation subsection.*—In this subsection supplies which require sterilization before use are stored and prepared for sterilization. After use, these supplies are returned to the preparation section for cleaning and sorting before resterilization. Surgical instruments are prepared in packs in accordance with requests from the operating rooms.

For long-term storage, some instruments are coated with a preservative. For this reason, the first time all instruments are prepared for sterilization they should be thoroughly scrubbed with a commercial solvent or household detergent.

The preparation subsection must be located where a supply of water is available.

(2) *Sterilization subsection.*—In this subsection supplies are sterilized and dispensed to treatment areas. There are three types of sterilizers depending on CDEH model: 40-quart pressure cooker-type autoclaves, open boiling water sterilizers, and electrical or fuel-heated hospital pressure-type sterilizers. Although sterilizers may be used in other sections of the hospital, most sterilization is done in this section.

9. Mortuary Area

The mortuary area is located in an out-of-the-way area inside or near the hospital. In this area it may be necessary to make provision for special security and for partial postmortems because of deaths from unknown causes.

Flow Chart

A suggested flow of patients through the Civil Defense Emergency Hospital is shown in figure 4.

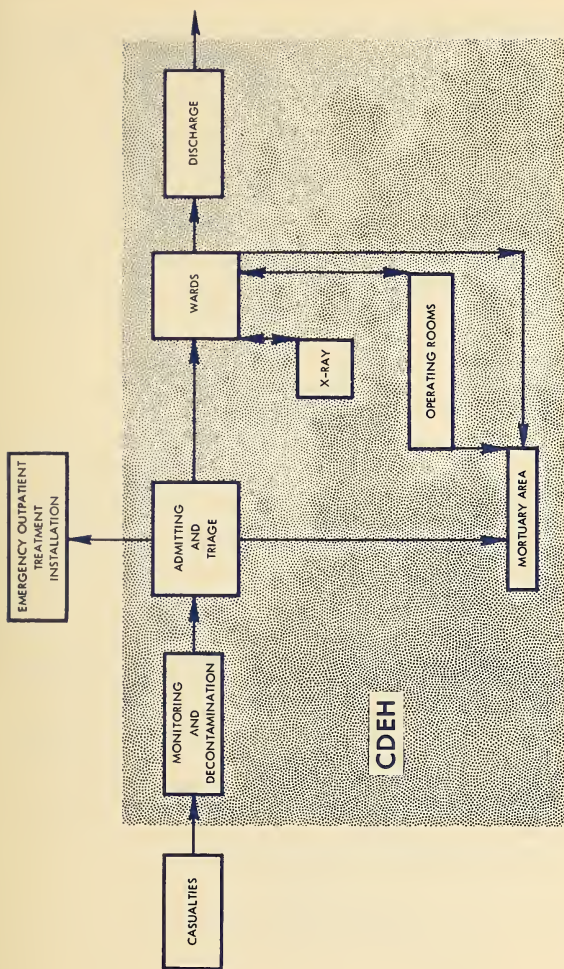


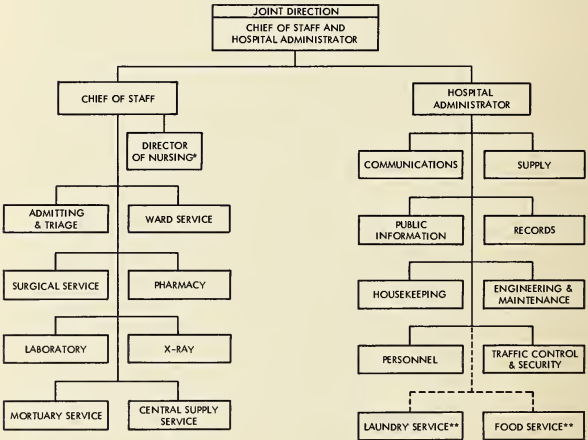
Figure 4.—Patient Flow Chart

B. ADMINISTRATION OF THE HOSPITAL

Administration of a CDEH involves organizing and staffing the hospital, ensuring that adequate quantities of supplies for its operation and maintenance are available and directing its operations.

As stated earlier, the CDEH is in the joint coordinated charge of a physician designated as chief of staff, and an administrator designated as hospital administrator. Figure 5 shows a suggested division of responsibility. The chief of staff is responsible for all medical services and the administrator for all other services. However, the chief of staff has overriding authority in the event of an unresolvable difference between himself and the administrator.

The administrative office of the CDEH should provide working space for the chief of staff, the hospital administrator, the director of nursing and, if possible, the communication and messenger staff.



* Supervision of nursing personnel and medical aides.

** These services will most often be provided as support by the Civil Defense Welfare Service and when under welfare supervision, will not be an integral part of the CDEH organization.

Figure 5
Suggested Organization of a CDEH

1. Chief of Staff

The chief of staff will be fully occupied directing overall hospital medical services. Only under extreme circumstances will he personally perform treatment. Postattack, the chief of staff should:

- a. Proceed, as soon as it has been determined safe to move, to the building to be used as the CDEH operating site.
- b. Confirm that the hospital administrator makes contact with the appropriate civil defense control center to inform emergency health staff that the hospital is being set up and to request that the preattack plan for supporting services be carried out.
- c. Advise the administrator in the activation of the hospital.
- d. Check with the hospital administrator to see that preattack plans are carried out for the provision of supplies not included in the CDEH unit.
- e. Direct the setting up of treatment areas as soon as the CDEH arrives.
- f. Assign personnel to treatment and technical sections, providing for 24-hour staffing. If the staff is insufficient, request additional personnel from appropriate agency.
- g. Supervise treatment service operations.
- h. Keep continuously apprised of availability and needs in personnel and supplies for treatment services and inform hospital administrator.
- i. If necessary, reduce surgical lag by improvising additional operating facilities and requesting and assigning additional personnel.

2. Hospital Administrator

The hospital administrator is responsible for services other than medical and allied medical services (see fig. 5). Postattack, he should:

- a. Proceed, as soon as it has been determined safe to move, to the building to be used as the CDEH operating site.
- b. Establish best communications capability possible: Telephone, two-way radio, and/or messenger.

Note: Because the chief of staff and the hospital administrator have joint responsibility for hospital operations, some of the same duties are listed for both positions.

- c. Establish contact with the appropriate civil defense control center to inform emergency health staff that the hospital is being set up and to request that the preattack plan for supporting services be carried out.
- d. Direct the activation personnel in preparing the building.

- e. Prepare signs with names of hospital sections and post them on rooms to be used, in order that supplies and equipment can be moved into proper rooms.
- f. Direct the moving in and setting up of the equipment.
- g. Obtain supplies needed by the hospital, but not included in CDEH unit.
- h. Assign personnel to those sections for which hospital administrator is responsible and maintain pool of untrained personnel who can be used anywhere in the hospital.
- i. Arrange for adequate security of the CDEH building to prevent entrance by unauthorized persons.
- j. Supervise administrative services.
- k. As hospital operations proceed, keep continuously apprised of availability and needs in personnel, supplies and supporting services.
- l. Maintain contact with the emergency health staff at the control center, sending in information on workload and requests for personnel, supplies and supporting services as required.

3. Director of Nursing

The director of nursing is responsible to the chief of staff for all nursing personnel (including medical aides) and for organizing and supervising nursing services throughout the hospital. Postattack, the director of nursing should:

- a. Proceed, as soon as it has been determined safe, to the building to be used as the CDEH operating site.
- b. If she arrives before the chief of staff or hospital administrator, temporarily assume their responsibilities.
- c. Assist the chief of staff in the organization of treatment services.
- d. Assist in supervising setting up of the hospital.
- e. Assign nursing personnel to hospital sections so that the most effective use can be made of personnel available.
- f. Supervise nursing services.
- g. Arrange for improvising or compensating for items which ordinarily are available in hospitals, but which are not included in the CDEH.
- h. Anticipate requirements for additional personnel or supplies and report to the chief of staff and hospital administrator.

C. HOSPITAL RECORDS

Records are a vital part of patient care but disaster conditions will not permit extensive recordkeeping. Nine forms for keeping records are used in the CDEH (see figs. 6-14):

- Emergency Hospital Clinical Record.
- Emergency Hospital Clinical Record Jacket.
- Index and Information Card.
- Laboratory Urinalysis Request and Report Form.
- Laboratory Hematology Request and Report Form.
- Laboratory Miscellaneous Test or Examination Form.
- Radiographic Request and Report Form.
- Emergency Hospital Supply Request Form.
- Hospital Disposition Log.

All forms except the Emergency Hospital Supply Request Form and the Hospital Disposition Log are furnished in the CDEH. These two forms are not furnished because their use is optional. If the community decides to adopt these forms, they should be reproduced locally and stored with the CDEH. Some communities may decide to use additional forms, such as Operating Room Records, Baby Records, and will arrange the design and reproduction locally.

If the CDEH is used to expand a permanent hospital and if the disaster plan for that hospital has provided for the use of an emergency record system, then the forms outlined in the hospital's disaster plan should be used rather than those supplied with the CDEH.

1. Emergency Hospital Clinical Record (Fig. 6)

The Emergency Hospital Clinical Record is prepared and inserted into the Emergency Hospital Clinical Record Jacket with any additional records which come into the hospital with the patient. For example, some patients may have Emergency Medical Tags attached to them when they enter the hospital. This tag is put on by first aid teams or rescue workers. Two types of Emergency Medical Tags are shown in figure 15. Type one, which has been stockpiled in some communities, carries complete data concerning the casualty. Type two is a simplification carrying information only on date and time of discovery, name, treatment and whether physician, other allied health worker or lay person rendered treatment. If printed Emergency Medical Tags are not available, first aid and rescue workers may use plain shipping tags. Appropriate information is taken from the tag and entered on the Emergency Hospital Clinical Record. If there are no accompanying tags or records, the patient should be questioned, if possible, concerning injections

or other treatment he may have received before arriving at the hospital and this information recorded.

The record stays with the patient and is continued throughout his hospital stay. It is a combination admission and progress record, and should be preserved for a permanent case record.

2. Emergency Hospital Clinical Record Jacket (Fig. 7)

The Emergency Hospital Clinical Record Jacket is tied to the patient in admitting and triage. The Emergency Hospital Clinical Record and other tags and records are placed in the jacket. Most of the information required for completing the jacket is self-explanatory. Portions of the information can be obtained from the Emergency Medical Tag (fig. 15) or other records, that may accompany the patient on admission.

"Principal diagnosis" should be filled in from the diagnosis on the clinical record. "Special attention needed in transit" is for the guidance of the ambulance driver or medical personnel if the patient is moved to another medical installation. Also, if the patient is moved, under "final disposition" the destination of the patient and the date should be entered. On the reverse side of the jacket, space is provided for recording transfers of patients from one hospital to another in chronological order.

3. Index and Information Card (Fig. 8)

The Index and Information Card is filled out in sets of three, one original and two carbon copies. Items 1 to 13 are filled out in admitting and triage and the name and address, or other information identifying the hospital, entered at the lower right corner. Items 14 and 15 are filled out only when the patient leaves the hospital.

The first copy of the Index and Information Card is placed in the record jacket for ward use, the two carbons are sent from admitting to the administration office. One copy is kept on file in that office and the other copy sent, by the hospital administrator, to the local welfare registration and inquiry service.

If the patient is unable to furnish the information, an attempt should be made to obtain it from other sources, such as a wallet. Other patients who entered the hospital at the same time may also be questioned. "Source of admission," item 11, should indicate whether the patient was transferred from another medical installation and also by what means he was transported. The back of the card is for supplemental information, with followup notes entered chronologically.

If the patient dies, the original copy of the Index and Information Card

should be completed and should accompany the body to mortuary service. Other records are retained by the hospital. Subsequently, the hospital administrator's copy of the Index and Information Card may be updated from information on the emergency hospital clinical record (or from the Hospital Disposition Log if one is used). For this reason it is important that the disposition be recorded on the Emergency Hospital Clinical Record.

4. Radiology Request and Report Form (Fig. 9)

This form is also filled out in duplicate. Both copies are sent to the X-ray section with the patient. Upon completion of the X-ray report, the X-ray section keeps one copy of the report, and returns the other copy for the patient's record. It should be placed in the Clinical Record Jacket.

5. Laboratory Urinalysis, Hematology and Miscellaneous Test or Examination Report Forms (Figs. 10, 11, 12)

The person requesting a test and report fills out the form in duplicate and sends both copies to the laboratory. When tests are completed and results entered on the form, the laboratory keeps one copy of the form for their records and returns one copy to the section which made the request. Each section requesting laboratory tests should maintain a log of tests requested. When completed test reports are returned to them, they should be checked off on the log. The test report should be placed in patient's Clinical Record Jacket.

6. Emergency Hospital Supply Request Form—Optional (Fig. 13)

An Emergency Hospital Supply Request Form is used to requisition equipment and supplies from central supply or pharmacy. The form is made out in triplicate. One copy is retained in the section making the request and two copies are sent either to central supply or pharmacy. The copy retained in the section serves as a record of what was ordered and when. One of the two copies sent requesting the supplies is returned with the supplies ordered. The other copy is kept in either pharmacy or central supply for their records.

If the form is not reproduced by the community for storage with the CDEH, pads of unruled paper can be used for the operation of supply and equipment requisitioning.

7. Hospital Disposition Log—Optional (Fig. 14)

The Hospital Disposition Log is a daily, nonpermanent worksheet record kept in each ward on the disposition of patients. The information is

for the use of the hospital administrator and for the completion of the disposition items on the patient's Index and Information Card. The log should be made out in triplicate—one copy kept in the ward and two copies sent to the administration office. The hospital administrator sends one copy to the same civil defense office to which he sent the Index and Information Card.

If the form is not reproduced by the community for use with the CDEH, the information can be recorded on plain sheets of paper.

D. PERSONNEL REQUIREMENTS

Figure 16 is a suggested basic CDEH staffing pattern for 24-hour operation. In some communities personnel of these skill groups and in these numbers will not be available. Substitutions of less skilled personnel than those indicated may have to be made. This situation can be improved, however, by increasing the capabilities of those assigned, through training, and by arranging with nearby communities to send personnel to help staff the unit. Physician specialists and other professional staff will often, of course, function outside the bounds of their peacetime specialties, while serving in the CDEH.

Although the actual postattack situation will frequently make it necessary to depart from the planned staffing pattern, prior planning and assignment of staff will greatly increase the likelihood that enough personnel will be on hand postattack to operate the unit.

The chief of staff, hospital administrator and director of nursing will each assign personnel to the hospital services for which he is responsible. Depending on the situation, they may decide to appoint sectional supervisory personnel to assist them. For instance, the chief of staff may want to appoint a chief of medicine and a chief of surgery. The hospital administrator may appoint a personnel officer and supply officer, in addition to the building custodian. And the director of nursing may select the most experienced nurses and assign one to be responsible for nursing services in each section.

Form Approved
Budget Bureau No. 97-5008-1

EMERGENCY HOSPITAL CLINICAL RECORD

Last name	First	Middle
Sex		Age
Home address		
Received at (Name or symbol and location of hospital)		
Date		
Source of admission		
Diagnosis on admission, additional diagnoses, operations, etc., with dates.		
Disposition		
Signature		Date
M. D.		
Received at (Name or symbol and location of hospital)		
Date		
Diagnosis on admission, additional diagnoses, operations, etc., with dates.		
Disposition		
Signature		Date
M. D.		
Received at (Name or symbol and location of hospital)		
Date		
Diagnosis on admission, additional diagnoses, operations, etc., with dates.		

16-70000-1

(Front)

Received at (Name or symbol and location of hospital)	
Date	
Diagnosis on admission, additional diagnoses, operations, etc., with dates.	
Disposition	
Signature	Date
M. D.	
Received at (Name or symbol and location of hospital)	
Date	
Diagnosis on admission, additional diagnoses, operations, etc., with dates.	
Disposition	
Signature	Date
M. D.	

INSTRUCTIONS

Used as a brief consecutive clinical record for all patients admitted to an emergency hospital.

Initiated at the first hospital to which patient is admitted; transferred with the patient to succeeding hospitals. When the patient is moved from one hospital to another, this record is enclosed in the emergency hospital medical record jacket along with other medical records; jacket is attached to patient during transport. This record closed upon discharge from hospital.

If one card is inadequate, continue record on a second card, or a third, etc., marking the cards as first card, second card, etc. Each additional card or other record must bear satisfactory identification of the individual.

When this record is closed, it and all other pertinent medical records will be disposed of as directed by the State civil defense authority.

U. S. GOVERNMENT PRINTING OFFICE 16-70000-1

(Back)

Figure 6

Emergency Hospital Clinical Record

<p>NOTE: Must be securely attached to patient. To contain individual medical records pertaining to this patient.</p>		<p>NOTE: Before inner flap before placing papers inside, then fold it down over contents to prevent them from dropping out. Fold outer flap over opening as additional protection.</p>	
<p>LAST NAME FIRST NAME INITIAL</p>		<p>TRANSPORTATION MEMORANDA</p> <p>(In order that the movement of patient from one hospital to another may be recorded chronologically all transportation units transporting patients from one hospital to another should make appropriate entries in the spaces provided below.)</p>	
<p>HOME ADDRESS</p>		<p>PATIENT WAS TRANSPORTED</p>	
<p>HOSPITAL</p>		<p>FROM (HOSPITAL UNIT)</p>	<p>TO (HOSPITAL UNIT)</p>
<p>PRINCIPAL DIAGNOSIS (Brief)</p>		<p>BY (TRANSPORTATION ORGANIZATION)</p>	
<p>ORDERS FOR IMMEDIATE TREATMENT</p> <p><input type="checkbox"/> SURGERY</p> <p><input type="checkbox"/> TRANSFUSION</p> <p><input type="checkbox"/> SHOCK</p> <p><input type="checkbox"/> TOURNIQUET</p>		<p>DATE</p>	
<p>ADMIT TO:</p>		<p>DATE ADMITTED A. M. P. M.</p>	
<p>SPECIAL ATTENTION NEEDED IN TRANSIT, OR OTHER REMARKS</p>			
<p>FINAL DISPOSITION</p>			
<p>DATE:</p>			

(Front)

(Back)

Figure 7.—Emergency Hospital Clinical Record Jacket

1. Last name	First name	Middle name	2. Bldg-room
3. Address			4. E.M. tag No.
5. Date of birth	6. Age	7. Sex	8. Race
9. Religion			
10. Person to be notified (Name, address, telephone No.)			
11. Source of admission		12. Date admitted	AM PM
13. Admitted for (Check one or more)		<input type="checkbox"/> Shock <input type="checkbox"/> Hemorrhage <input type="checkbox"/> Mech. trauma <input type="checkbox"/> Burns <input type="checkbox"/> Radia. sick. <input type="checkbox"/> Other	
14. Disposition of case		<input type="checkbox"/> Home <input type="checkbox"/> Transfer to other hospital <input type="checkbox"/> Died <input type="checkbox"/> Other	
(Insert destination - name of hospital, or home and street and city address.)			
15. Date and hour of disposition		AM	PM
Index and information card			Hospital

Figure 8
Index and Information Card

PATIENT'S LAST NAME - FIRST NAME - MIDDLE NAME		REGISTER NO.	WARD NO.
AGE	SEX	(Check one)	
		<input type="checkbox"/> BEDRIDE, WHEELCHAIR, OR STRETCHER <input type="checkbox"/> BED PATIENT <input type="checkbox"/> AMBULATORY	
EXAMINATION REQUESTED			
REQUESTED BY		DATE OF REQUEST	
(Above space for mechanical imprinting, if used)			
PERTINENT CLINICAL HISTORY, OPERATIONS, PHYSICAL FINDINGS, AND PROVISIONAL DIAGNOSIS			
FILM NO.		DATE OF REPORT	
RADIOGRAPHIC REPORT			
SIGNATURE: (Specify location of laboratory if not part of requesting facility)			
NAME OF HOSPITAL OR OTHER MEDICAL FACILITY		Standard Form 518A (Rev. Aug. 1954) Promulgated by Bureau of the Budget Circular A-32 (Rev.) RADIOGRAPHIC REPORT 519-205	

Figure 9
Radiology Request Report Form

REGISTER OR UNIT NO.		WARD NO.	<input type="checkbox"/> BED PATIENT <input type="checkbox"/> AMBULATORY
REQUESTED BY		DATE OF REQUEST	
DATE, TIME, AND METHOD OF COLLECTION			
PATIENT'S LAST NAME—FIRST NAME—MIDDLE NAME			
COLOR APPEARANCE	MICROSCOPIC, REMARKS		
REACTION			
SPECIFIC GRAVITY			
ALBUMIN			
SUGAR			
ACETONE			
BILE			
DATE OF REPORT		SIGNATURE (Specify Lab. if not part of requesting facility)	
NAME OF MEDICAL FACILITY			

Standard Form 514-A—Rev. June 1959.
Bureau of the Budget Circular A-32

GPO: 1959-885093

URINALYSIS

REGISTER OR UNIT NO.		WARD NO.	<input type="checkbox"/> BED PATIENT <input type="checkbox"/> AMBULATORY
REQUESTED BY AND DATE		DATE COLLECTED	
CLINICAL DATA			
PATIENT'S LAST NAME—FIRST NAME—MIDDLE NAME			
W.B.C.		R.B.C.	
DIFFERENTIAL COUNT		HEMATOCRIT	
NEUTROPHILES		HEMOGLOBIN	
BLASTS		BLEEDING TIME	
MYELOCYTES		COAGULATION TIME	
BAKES		BLOOD MORPHOLOGY, REMARKS	
LYMPHOCYTES			
MONOCYTES			
EOSINOPHILES			
BASOPHILES			
PLATELETS			
SEDIMENTATION RATE			
C.S.R.			
DATE OF REPORT		SIGNATURE (Specify Lab. if not part of requesting facility)	
NAME OF MEDICAL FACILITY			

Standard Form 514-B—Rev. June 1959.
Bureau of the Budget Circular A-32

GPO: 1959-885072

HEMATOLOGY

REGISTER OR UNIT NO.		WARD NO.	<input type="checkbox"/> BED PATIENT <input type="checkbox"/> AMBULATORY
REQUESTED BY AND DATE		DATE AND TIME COLLECTED	
CLINICAL DATA			
PATIENT'S LAST NAME—FIRST NAME—MIDDLE NAME			
SPECIMEN AND SOURCE		EXAMINATION REQUESTED	
RESULT			
DATE OF REPORT		SIGNATURE (Specify Lab. if not part of requesting facility)	
NAME OF MEDICAL FACILITY			

Standard Form 514-M—Rev. June 1959.
Bureau of the Budget Circular A-32

GPO: 1959-885094

MISCELLANEOUS

Figures 10, 11, 12.—Laboratory Urinalysis, Hematology and Miscellaneous Test or Examination Report Forms

EMERGENCY HOSPITAL
SUPPLY REQUEST FORM

FROM _____

SECTION _____

ROOM _____

TO: (check one)

☐ STERILE SUPPLY
 ☐ PHARMACY
 ☐ STORES

Date _____

Time _____

QUANTITY	ITEM NEEDED	IDENTIFYING NO.
DISPOSITION OF REQUEST: <input type="checkbox"/> ISSUED <input type="checkbox"/> NOT AVAILABLE <input type="checkbox"/> OUT OF STOCK <input type="checkbox"/> REORDER _____		
INSTRUCTIONS: Prepare in triplicate. Send two copies to Sterile Supply, Pharmacy or Stores. Retain one copy.		

Figure 13.—Emergency Hospital Supply Request Form

HOSPITAL DISPOSITION LOG		
Name or designation of hospital	Ward _____	Date _____
Name	To: Place, unit or person	Disposition Time

Figure 14.—Hospital Disposition Log (20 lines)

EMERGENCY MEDICAL TAG

Serial No. _____

Name and home address of casualty _____

Sex: _____ Age: _____

Location when injured (describe exact location) _____

Found at (describe exact location) _____

Togged: Date _____ Hour _____

Type of injury and treatment (by first-aid worker) _____

Name of first-aid worker _____

Diagnosis and treatment at first-aid station _____

Sedation _____ Date: _____ Hour: _____

Morphine _____ Date: _____ Hour: _____

Disposition _____

Symbol of station _____ Signature—M. D. _____

SUPPLEMENTAL RECORD

EMERGENCY MEDICAL TAG

Name _____ Date _____ Time _____

Treatment _____

Indicate Whether Physician, Other Allied Health Worker or Lay Person Rendered Treatment: _____

Figure 15.—Two Types of Emergency Medical Tags

Figure 16
Sample Staffing Pattern for 24-Hour Operation—Civil Defense Emergency Hospital

Special Detail ^a		HOSPITAL SECTIONS												
		MONITORING — 4												
		DECONTAMINATION — 10												
		Personnel category												
ADMITTING AND TRIAGE	OPERATING ROOMS	WARD SERVICES	CENTRAL SUPPLY	PHARMACY	LABORATORY	X-RAY	ADMINISTRATOR'S OFFICE	MEDICAL RECORDS	COMMUNICATIONS	ENGINEERING AND MAINTENANCE	MORGUE	FOOD ^b	LAUNDRY ^b	TOTAL
Physicians ^c	2	6	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
Dentists (and/or Veterinarians).....	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Nurses, professional.....	2	8	20	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	34
Anesthetists (M.D. or allied medical).....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6
Nurses, practical.....	2	8	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18
Pharmacists.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	2
Laboratory technicians.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	2
X-ray technicians.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	2
Medical aides ^d	12	6	88	14	2	2	4	.....	.....	.....	2	.....	.....	128
Administrators and assistants.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Maintenance engineers.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2
Chaplains.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Clerks.....	2	.....	.....	4	.....	.....	3	4	4	.....	2	2	2	24
Helpers and messengers.....	2	.....	16	4	2	2	2	2	4	.....	2	4	4	46

Custodians and housekeepers.....	2	2	20																24
Food service personnel ^b																			6
Laundry service personnel ^b																			2
TOTAL.....	24	39	138	38	8	8	6	11	6	8	4	6	12	8					316

^a Duties may be assumed by regular staff. If not, additional positions must be added.

^b Food and laundry will usually be provided by civil defense supporting services. Food and laundry personnel, therefore, will often be under nonhealth supervision and may be located physically apart from the CDEH operating site.

^c One physician will serve as chief of staff and will participate in treatment services only when necessary.

^d Includes such skills as nurse aid, ward maid, attendant, orderly, surgical aid, first aid technician.

This table is not intended to establish a precise staffing pattern. Circumstances in a given community will often require departures from this pattern. Less skilled personnel than recommended may have to be substituted for some positions, and individual staff members may have to perform the functions of two or more positions. It may be necessary to begin operations with a much smaller staff which would gradually be augmented by personnel from neighboring communities and refugee population.

APPENDIX A

USE OF CDEH IN NATURAL DISASTERS

Use of the CDEH in a natural disaster is possible only with special Federal and State authorization. According to Article VIII, CDEH Storage Agreement, PHS-3998, "A hospital or component parts thereof stored under this agreement may be made available to the State or its political subdivisions for use in a major peacetime disaster * * * upon the specific authorization of the Public Health Service Regional Health Director, under such terms and conditions as he may prescribe * * *."

However, a general release from the Public Health Service states, "CDEH's should not be utilized in natural disasters. The function of Civil Defense Emergency Hospitals is to provide emergency health services during national disaster. Breaking out parts of the unit, such as cots and blankets, disables the unit for use as a hospital. The capability of these hospitals should not be utilized in natural disaster. Thus, CDEH's may not be opened in whole or in part without the expressed approval of the Regional Health Director or his designee. Approval will be granted only when medical supplies and equipment are not available elsewhere and life is in jeopardy * * *."

In a major natural disaster, arrangements can be made to obtain medical supplies, cots and blankets from Public Health Service Civil Defense Medical Depots. Procedures for the release of this material may be obtained from your State Health Department or civil defense agency.

APPENDIX B

OTHER PUBLICATIONS TO BECOME AVAILABLE ON THE CIVIL DEFENSE EMERGENCY HOSPITAL

X-ray Section of the Civil Defense Emergency Hospital (F-2). Available January 1964.

Central Supply Section of the Civil Defense Emergency Hospital (F-3). Available February 1964.

Laboratory Section of the Civil Defense Emergency Hospital (F-4). Available March 1964.

Operation of Generators and Water Pumps in the Civil Defense Emergency Hospital (F-5). Available June 1964.

Staffing the Civil Defense Emergency Hospital (F-6). Available December 1964.

Checklist for Developing a Civil Defense Emergency Hospital Utilization Plan. Available November 1963.

The above publications will be available upon request, from your State Health Department, civil defense office, or Division of Health Mobilization, Public Health Service, Washington, D.C., 20201.

NOTES



Publication in the Health Mobilization Series
are keyed by the following subject categories:

A—General

B—Environmental Health

C—Radiological Health

D—Medical Care and Treatment

E—Health Facilities

F—Civil Defense Emergency Hospitals

G—Supplies and Equipment

H—Shelter Health

I—Health Manpower

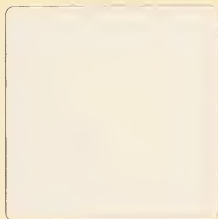
J—Damage Assessment and Resource Evaluation

K—Public Water Supply

L—Training, Health Education, and Public Information

M—Tests, Exercises, and Readiness Surveys

N—Vital Statistics, Medical Records, and Reports



Public Health Service
Publication No. 1071-F-1